

application. Thus, claims 164-329 are currently pending in the application. Reconsideration of the claims in view of the following remarks is respectfully requested.

I. Obviousness-Type Double Patenting Rejections

Claims 164-329 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of the following U.S. Patent Nos. 5,295,196; 5,430,664; 5,467,405; 5,790,697; 5,806,650; 5,815,592; 5,867,589; 5,870,487; 5,875,259; 5,905,810; 5,992,601; 6,012,565; 6,073,744; 6,220,419 B1; 6,237,739 B1; 6,241,069 B1; 6,278,795 B1 and 6,311,819 B1. To formulate an obviousness-type double patenting rejection, the claims of the pending application must be compared to the claims of an application or a patent. See MPEP 804. In the Office Action, none of the claims of the above-identified U.S. patents has been specifically identified as relating to the obviousness-type double patenting rejections. In order to allow the Applicants to adequately respond to this rejection, the Applicants respectfully request an identification of the specific claim(s) of each of the above-identified U.S. patents or, alternatively, for these obviousness-type double patenting rejections to be withdrawn.

Provisional Obviousness-Type Double Patenting Rejections

Claims 164-329 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 164-327 of copending Application Nos. 09/541,170 and 09/542,487; claims 157, 158 and 164-190 of copending Application No. 09/635,967; claims 164-337 of copending Application No. 09/607,019; claims 1-145 of copending Application No. 09/684,103; and claims of Application No. 09/126,580.

To obviate some of the provisional obviousness-type double patenting rejections, the Applicants will file a terminal disclaimer with respect to Application Nos. 09/541,170, 09/542,487

and 09/607,019 when the other rejections have been withdrawn provided such terminal disclaimer remains necessary.

With respect to the remaining provisional obviousness-type double patenting rejections, the Applicants respectfully request the withdrawal of such rejections because the claims of each of the applications have many elements that are not present in any of the claims of the present application. As discussed above, a provisional obviousness-type double patenting rejection involves comparing the claims of the present application to that of a second application.

Specifically, the claims of Application No. 09/684,103 differ from the claims of the present application. For example, claim 1 of Application No. 09/684,103 recites several elements that are not recited in the present invention (*e.g.*, “detecting the presence or absence of magnetic ink in a plurality of zones,” and “comparing the detected information concerning which zones contained magnetic ink....”). Other claims of Application No. 09/684,103 recite some of the same elements, as well as additional elements that are not recited in the present application including elements directed to a magnetic scanhead, a memory adapted to store master security thread location and detecting the presence of a security thread. The claims of the present application also have elements that are not present in the claims of Application No. 09/684,103.

The claims of Application No. 09/635,967 also differ from the claims of the present application. For example, claim 1 of Application No. 09/635,967 recites several elements that are not recited in the present invention (*e.g.*, “a memory adapted to store information associated with a plurality of modes of operation of the device”, “the memory being designed to store at least one user-defined mode of operation”, “the user-mode of operation being capable of subsequent recall and selection of a user....”, “an interface adapted to permit a user of the evaluation device to

define the user-defined mode of operation” and “a mode selection element”). Other claims of Application No. 09/635,967 recite some of the same elements, as well as additional elements not recited in the claims of the present application. The claims of the present application also have elements that are not present in the claims of Application No. 09/635,967.

The claims of Application No. 09/126,580 differ from the claims of the present application. For example, claim 1 of Application No. 09/126,580 recites several limitations that are not recited in the present invention (*e.g.*, “a control panel having an input device adapted to receive input from an operator of the device” and “a processor...programmed to...enable the operator, upon suspension of the operation of the device to designate via the control panel the denomination of a bill whose denomination is not determined by the processor” and “enable the operator, upon suspension of the operation of the device, to restart the operation of the device without designating the denomination of a bill whose denomination is not determined by the processor”). Other claims of Application No. 09/126,580 recite some of the same elements, as well as additional elements not recited in the claims of the present application. The claims of the present application also have limitations that are not present in the claims of Application No. 09/126,580.

Thus, the Applicants believe that the provisional obviousness-type double patenting rejections with respect to Application Nos. 09/684,103, 09/635,967 and 09/126,580 should be withdrawn.

The Applicants believe that Application No. 09/864,423 recited in the Office Action is not an application owned by the assignee of the present application. The Applicants note that Application No. 08/864,423 is an application owned by the assignee of the present application and

issued as U.S. Patent No. 6,311,819, which was recited in the obviousness-type double patenting rejection.

## II. 35 U.S.C § 102 Rejections

Claims 164-329 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,419,423 to Ishida et al. ("Ishida"), U.S. Patent No. 4,694,963 to Takesako ("Takesako"), U.S. Patent No. 5,201,395 to Takizawa et al. ("Takizawa"), U.S. Patent No. 5,301,786 to Yoshihara ("Yoshihara"), and U.S. Patent No. 5,761,089 to McNerny ("McNerny"). Claims 164-213 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,759,382 to Walkley et al. ("Walkley"). Each of these applied references is missing at least one element from each of the recited independent claims (claims 164, 204, 209, 214, 259, 268, 273, 290, 301, 306, 322 and 326).

Ishida, Takizawa and Yoshihara do not disclose, *inter alia*, (a) receiving a stack of bills in an input receptacle and (b) counting the denomination of bills. Such features are recited in all of the independent claims of the present application.

Ishida is directed to "a paper money processor" used "for determination of whether or not the inserted paper money is genuine." Col. 2, lines 8-9 and col. 2, lines 20-21. Ishida discloses "the paper money [is] fed through the paper money transporter section 4 into a paper money accommodation box 6" at col. 4, lines 22-25. Thus, claims 164-329 are not anticipated by or obvious over Ishida.

Takizawa is directed to "a bill examination device used in an automatic cash deposit/dispensation machine or an automatic vending machine". Col. 1, lines 5-9 and col. 2, lines 23-28. The device of Takizawa does not have an input receptacle adapted to receive a stack

of bills. See, *e.g.*, col. 1, lines 11-17 (“[w]hen a bill (i.e., bank note or paper currency) is inserted or entered by a customer into an automatic cash deposit/dispensation machine or an automatic vending machine, the denomination of the bill is identified and the authenticity of the bill is tested.”). Thus, claims 164-329 are not anticipated by or obvious over Takizawa.

Yoshihara is directed to “validating a paper-like piece such as a bill or bank note, a note used as a substitute for money, a gift card or a bill made of plastics...” Col. 1, lines 9-12 and col. 3, lines 64-68. It is clear that the device of Yoshihara, as shown in, for example, FIG. 5, does not have an input receptacle adapted to receive a stack of bills, but rather appears to be used in a similar manner as Takizawa (*i.e.*, in a automatic cash deposit/dispensation machine or an automatic vending machine). Thus, claims 164-329 are not anticipated by or obvious over Yoshihara.

McInerny, does not disclose, *inter alia*, (a) two or more output receptacles and (b) determining the denomination of the bills. Such features are recited in all of the independent claims of the present application. McInerny discloses a counterfeit document detection apparatus that includes only one output receptacle. See FIGs. 1 and 2a, and col. 3, line 58-col. 4, line 3. McInerny does not denominate bills, but rather is a document counting and handling device that can count, verify and stack a particular type of document, such as currency of the same denomination. See generally col. 1, lines 18-20; col. 2, lines 3-7 and 34-40; col. 3, lines 58-63 and col. 11, line 65 to col. 12, line 43. Thus, claims 164-329 are not anticipated by or obvious over McInerny.

Walkley, does not disclose, *inter alia*, determining the denomination of the bills. Such a feature is recited in all of the independent claims of the present application. Rather, Walkley is

directed to an apparatus for sorting currency according to bill fitness, which is measured according to the wear and tear of the bill, and for counting the bills as they pass through a monitoring station. Col. 4, lines 30-34 and col. 7, lines 3-5. Thus, claims 164-213 are not anticipated by or obvious over Walkley.

Takesako, does not disclose, *inter alia*, (a) halting the transporting such that a flagged bill is the last bill in one of the output receptacles, (b) wherein the flagging comprises halting the transporting when a bill meets or fails to meet at least one of the criteria, (c) wherein the flagging comprises halting the transporting when a bill is flagged because the denomination of the bills is not determined or is a suspect bill, (d) stopping a transport drive motor in response to the stopping signal as a result of a no call signal or a suspect signal, (e) halting the transporting in a predetermined manner in response to a determination that a bill meets a stranger bill criterion and in response to a determination that a bill meets a no call bill criterion, (f) presenting no call bills in a third one of the output receptacles, (g) presenting bills not having the target denomination in a third one of the output receptacles, and (h) upon encountering a bill having neither the first target denomination nor the second target denomination, then stopping the operation of the device if both the first and second output receptacles have one or more bills therein. One or more of such features are disclosed in each of the independent claims of the present application.

Rather, in Takesako, bills that are not recognized or that do not fit under preset criteria are referred to as "reject bills" and "are stacked in the reject stacker 22." Col. 7, lines 57-58. In fact, the device in Takesako appears to be designed to halt only when a preset number of bills is reached in one of the output receptacles. See, *e.g.*, col. 2, lines 47-50 ("when bills corresponding in quantity to the stack capacity or to a specified quantity less than the stack capacity . . . the

sorting operation is automatically interrupted”), and col. 10, lines 57-61 (“[t]he restart key 84 is operated for resuming the sorting operation on a lot of bills set in the feeder 12 after it has been interrupted in such a case as when the specified quantity is stacked in the stacker 18 or 20.”). Thus, claims 164-329 are not anticipated by or obvious over Takesako.

Thus, pending independent claims 164, 204, 209, 214, 259, 268, 273, 290, 301, 306, 322 and 326 are not anticipated by or rendered obvious over Ishida, Takesako, Takizawa, Yoshihara, McNerny, Walkley or any combination thereof. Thus, independent claims 164, 204, 209, 214, 259, 268, 273, 290, 301, 306, 322 and 326 should be in a condition for allowance. Claims 165-203, 205-208, 210-213, 215-258, 260-267, 269-272, 274-289, 291-300, 302-305, 307-321, 323-325 and 327-329, which depend either directly or indirectly from claim 164, 204, 209, 214, 259, 268, 273, 290, 301, 306, 322 or 326 should also be allowable for at least the same reasons.

### **CONCLUSION**

The Applicants submit that the claims are in a condition for allowance and action toward that end is earnestly solicited. The Commissioner is hereby authorized to charge deposit Account No. 10-0447 (47171-00269USC1) for any fees inadvertently omitted which may be

necessary now or during the pendency of this application, except for the issue fee.

Dated: February 19, 2002

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "John C. Gatz", is written over a horizontal line.

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**CLAIMS AFTER FEBRUARY 19, 2002 AMENDMENT (MARKED-UP)**

[1. A currency evaluation device for receiving a stack of currency bills and rapidly evaluating all the bills in the stack, said device comprising:

an input receptacle for receiving a stack of bills to be evaluated;

a plurality of output receptacles for receiving said bills after said bills have been evaluated;

a transport mechanism for transporting said bills, one at a time, from said input receptacle to one of said output receptacles along a transport path;

a discriminating unit for evaluating said bills, said discriminating unit including a detector positioned along said transport path between said input receptacle and said output receptacle, said discriminating unit counting and determining the denomination of said bills; and

means for flagging bills meeting or failing to meet a certain criteria; wherein said means for flagging causes said transport mechanism to halt in response to a determination that a bill meets or fails to meet said criteria, said bill meeting or failing to meet said criteria being termed a flagged bill.]

164. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;

counting and determining the denomination of the bills utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

determining whether the bills meet or fail to meet a non-piece count related criterion;

halting the transporting when a bill meets or fails to meet the criterion, a bill meeting or failing to meet the criterion being termed a flagged bill; and

wherein the halting is performed such that the flagged bill is positioned as the last bill in one of the output receptacles.

165. The method of claim 164 wherein the counting and determining the denomination of the bills comprises counting and determining United States currency bills of a plurality of denominations.

166. The method of claim 164 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

167. The method of claim 164 further including receiving denominated bills of more than one denomination in at least one output receptacle.

168. The method of claim 164 wherein the halting occurs when the denomination of a bill is not determined, a bill whose denomination is not determined being termed a no call bill, and wherein the halting of the no call bill is positioned at an identifiable location in one of the output receptacles.

169. The method of claim 164 wherein bills whose denomination are determined are delivered to a first set of one or more of the output receptacles and wherein bills whose denomination are not determined are directed to a second set of one or more of the output receptacles, a bill whose denomination is not determined being termed a no call bill, the output receptacles of the second set being different from the output receptacles of the first set.

170. The method of claim 169 wherein the second set of output receptacles includes a receptacle designated as a no call output receptacle.

171. The method of claim 170 wherein the halting occurs after a no call bill has been delivered to the no call output receptacle.

172. The method of claim 171 wherein the halting occurs with the no call bill being positioned at an identifiable location in the no call output receptacle.

173. The method of claim 172 wherein the halting occurs with the no call bill being the last bill transported to the no call output receptacle, wherein the criteria is the denomination of a bill and wherein a bill failing to meet the criterion of having its denomination determined is a flagged bill.

174. The method of claim 170 wherein the halting occurs before a no call bill has been delivered to the no call output receptacle.

175. The method of claim 174 wherein the halting occurs with the no call bill being located at an identifiable location within the transport path.

176. The method of claim 169 wherein the halting occurs after the no call bill has been delivered to an output receptacle of the second set.

177. The method of claim 175 wherein the halting occurs with the no call bill being positioned at an identifiable location in an output receptacle of the second set.

178. The method of claim 164 further including determining whether a bill is a stranger bill, wherein a bill failing to have its denomination determined is termed a no call bill, and further including delivering stranger bills to a first set of one or more of the output receptacles and delivering no call bills to a second set of one or more output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

179. The method of claim 164 further including determining whether a bill is a stranger bill and wherein the non-piece count related criterion is a bill being a stranger bill.

180. The method of claim 164 further including determining whether a bill is suspect, a bill determined to be suspect being termed a suspect bill.

181. The method of claim 180 wherein bills whose denomination have been determined are delivered to a first set of one or more of the output receptacles and wherein suspect bills are directed to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

182. The method of claim 179 wherein the second set of output receptacles includes a receptacle designated as a suspect output receptacle.

183. The method of claim 182 wherein the halting occurs before a suspect bill has been delivered to the suspect output receptacle.

184. The method of claim 183 wherein the halting occurs with the suspect bill being located at an identifiable location within the transport path.

185. The method of claim 181 wherein the halting occurs after a suspect bill has been delivered to the suspect output receptacle.

186. The method of claim 185 wherein the halting occurs with the suspect bill being positioned at an identifiable location in the suspect output receptacle.

187. The method of claim 186 wherein the halting occurs with the suspect bill being the last bill transported to the suspect output receptacle, and wherein the non-piece count criterion is a bill being suspect.

188. The method of claim 164 wherein the criterion is the denomination of the bill, a bill failing to have its denomination determined being termed a no call bill, and wherein the halting occurs with a no call bill as the last bill in a second set of one or more of the output receptacles.

189. The method of claim 164 wherein the criterion is a bill being a stranger bill, and wherein the halting occurs with a stranger bill as the last bill in a second set of one or more of the output receptacles.

190. The method of claim 164 wherein the criterion is a bill being a suspect bill, and wherein the halting occurs with a suspect bill as the last bill in a second set of one or more of the output receptacles.

191. The method of claim 164 wherein a bill failing to have its denomination determined being termed a no call bill, and further determining whether a bill is a suspect bill.

192. The method of claim 191 wherein the halting occurs when a bill is determined to be a suspect bill.

193. The method of claim 192 further including delivering bills whose denomination have been determined and suspect bills to a first set of one or more of the output receptacles and delivering no call bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

194. The method of claim 191 wherein the second set of output receptacles consists of a single output receptacle.

195. The method of claim 193 further including determining whether bills are stranger bills, and delivering stranger bills to an output receptacle of the second set.

196. The method of claim 195 wherein the halting occurs after a no call bill or a stranger bill has been delivered to an output receptacle of the second set.

197. The method of claim 196 wherein the halting occurs with the no call bill or the stranger bill being the last bill transported to an output receptacle of the second set.

198. The method of claim 195 wherein the halting does not occur after a no call bill or a stranger bill has been delivered to an output receptacle of the second set.

199. The method of claim 198 wherein the halting occurs after a suspect bill has been delivered to an output receptacle of the first set.

200. The method of claim 191 further including delivering bills whose denomination have been determined to a first set of one or more of the output receptacles and delivering no call bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

201. The method of claim 200 wherein the halting occurs after a no call bill has been delivered to an output receptacle of the second set.

202. The method of claim 164 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

203. The method of claim 164 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

204. A method of evaluating a stack of currency bills and using the currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;  
transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device along a transport path;  
providing a detector in the currency evaluation device that is positioned along the transport path between the input receptacle and the output receptacles, the detector being adapted to generate an output signal;  
counting and determining the denomination of the bills with the use of the output signal;  
determining whether the bills meet or fail to meet a non-piece count related criterion;  
halting the transporting when a bill meets or fails to meet the criterion, a bill meeting or failing to meet the criterion being termed a flagged bill; and  
wherein the halting is performed such that a flagged bill is positioned as the last bill in one of the output receptacles.

205. The method of claim 204 wherein the counting and determining the denomination of the bills comprises counting and determining United States currency bills of a plurality of denominations.

206. The method of claim 204 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

207. The method of claim 204 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

208. The method of claim 204 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

209. A method of evaluating a stack of currency bills and using the currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device along a transport path;

counting and determining the denomination of the bills utilizing a detector positioned along the transport path between the input receptacle and the output receptacles;

flagging a bill meeting or failing to meet any of a plurality of non-piece count related criteria;

wherein the flagging comprises halting the transporting of the bills in response to a determination that a bill meets or fails to meet at least one of the criteria, the at least one criteria being termed a halting criterion, a bill meeting or failing to meet any of the criteria being termed a flagged bill; and

wherein the halting occurs with a bill satisfying the halting criteria being positioned as the last bill in one of the output receptacles.

210. The method of claim 209 wherein the counting and determining the denomination of the bills comprises counting and determining United States currency bills of a plurality of denominations.

211. The method of claim 209 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

212. The method of claim 209 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.



213. The method of claim 209 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

214. A method of evaluating a stack of currency bills using a compact, high-speed United States currency evaluation device comprising:

receiving a stack of United States currency bills of a plurality of denominations in an input receptacle of the currency evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device at a rate of at least 800 bills per minute;

counting and determining the denomination of the bills including United States bills of a plurality of denominations at a rate of at least 800 bills per minute utilizing a detector positioned along a transport path between the input receptacle and the output receptacles; and

flagging bills that meet or fail to meet any of certain non-piece count related criteria, a bill meeting or failing to meet any of the criteria being termed a flagged bill; and

wherein the flagging comprises halting the transporting when a bill meets or fails to meet at least one of the criteria.

215. The method of claim 214 further including receiving denominated bills of more than one denomination in at least one output receptacle.

216. The method of claim 214 further including receiving denominated bills of more than one denomination in only one output receptacle.

217. The method of claim 214 wherein the halting occurs with a bill satisfying at least one criteria being positioned as the last bill in one of the output receptacles.

218. The method of claim 214 wherein one of the certain criteria is the denomination of a bill, a bill failing to meet the criterion of having its denomination determined being termed a no call bill, and wherein no call bills are flagged.

219. The method of claim 218 further including determining whether a bill is a stranger bill, wherein one of the certain criteria is a bill being a stranger bill and wherein stranger bills are flagged.

220. The method of claim 219 further including determining whether a bill is a suspect bill, wherein one of the certain criteria is a bill being a suspect bill and wherein suspect bills are flagged.

221. The method of claim 220 further directing stranger bills and no call bills to a first set of one or more of the output receptacles and directing suspect bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

222. The method of claim 221 wherein the first set of output receptacles includes at least two output receptacles.

223. The method of claim 221 wherein halting occurs when a no call bill or a stranger bill is delivered to an output receptacle of the first set.

224. The method of claim 221 wherein halting does not occur when a no call bill or a stranger bill is delivered to an output receptacle of the first set.

225. The method of claim 214 further including determining whether a bill is a stranger bill and wherein one of the certain criteria is a bill being a stranger bill, and wherein stranger bills are flagged.

226. The method of claim 214 further including determining whether a bill is a suspect bill, wherein one of the certain criteria is a bill being a suspect bill and wherein suspect bills are flagged.

227. The method of claim 214 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

228. The method of claim 214 wherein the halting occurs with a bill that meets or fails to meet the at least one criterion being positioned at an identifiable location in one of the output receptacles.

229. The method of claim 214 wherein the halting occurs with a bill that meets or fails to meet the at least one criterion being positioned at an identifiable location in the transport path.

230. The method of claim 214 wherein the halting occurs with a bill meeting or failing to meet the at least one criterion being located at a predetermined position.

231. The method of claim 214 wherein one of the certain criteria include the denomination of a bill and wherein the halting occurs when a bill fails to meet a criterion of having its denomination determined, a bill failing to meet the criterion of having its denomination determined being termed a no call bill.

232. The method of claim 231 wherein the halting occurs with a no call bill being positioned at an identifiable location in one of the output receptacles.

233. The method of claim 231 wherein the halting occurs with a no call bill being located at a predetermined position.

234. The method of claim 231 further including delivering bills meeting the certain criteria of having their denomination determined to a first set of one or more of the output receptacles and directing no call bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

235. The method of claim 234 wherein the halting occurs before a no call bill has been delivered to an output receptacle of the second set.

236. The method of claim 234 wherein the halting occurs after a no call bill has been delivered to an output receptacle of the second set.

237. The method of claim 236 wherein the halting occurs with a no call bill being positioned at an identifiable location in an output receptacle of the second set.

238. The method of claim 237 wherein the halting occurs with a no call bill being the last bill transported to an output receptacle of the second set.

239. The method of claim 214 further including determining whether bills are suspect bills and wherein the halting occurs when a bill meets a criterion of being determined to be a suspect bill.

240. The method of claim 239 further including delivering bills whose denominations have been determined to a first set of one or more of the output receptacles and delivering suspect bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

241. The method of claim 240 wherein the halting occurs after a suspect bill has been delivered to an output receptacle of the second set.

242. The method of claim 241 wherein the halting occurs with a suspect bill being positioned at an identifiable location in an output receptacle of the second set.

243. The method of claim 242 wherein the halting occurs with the suspect bill being the last bill transported to an output receptacle of the second set.

244. The method of claim 240 further including delivering bills whose denomination have not been determined to an output receptacle of the second set.

245. The method of claim 244 further including directing bills whose denomination have not been determined by the discriminating unit and the suspect bills to different output receptacles of the second set.

246. The method of claim 244 wherein the halting occurs in response to the denomination of a bill not being determined.

247. The method of claim 240 further including delivering bills whose denomination have not been determined to an output receptacle of the first set.

248. The method of claim 240 further including directing the bills whose denomination have been determined and the bills whose denomination have not been determined by the discriminating unit to different output receptacles of the first set.

249. The method of claim 214 wherein the certain criteria include the denomination of a bill and wherein the halting occurs when a bill fails to meet a criterion of having its denomination determined, a bill failing to meet a criterion of having its denomination determination being termed a no call bill, and further including determining whether bills are suspect.

250. The method of claim 249 wherein the halting occurs when a bill meets a second criterion of being determined to be suspect.

251. The method of claim 250 further including delivering bills whose denomination have been determined to a first set of one or more of the output receptacles and directing bills determined to be suspect and bills whose denomination have not been determined to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

252. The method of claim 251 wherein the halting occurs after a no call bill or a suspect bill has been delivered to an output receptacle of the second set.

253. The method of claim 252 wherein the no call bills and suspect bills are delivered to different output receptacles of the second set.

254. The method of claim 252 wherein the halting occurs with the no call bill or the suspect bill being the last bill transported to an output receptacle of the second set.

255. The method of claim 249 further including delivering bills whose denomination have been determined to a first set of one or more of the output receptacles and directing bills whose denomination have not been determined to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

256. The method of claim 255 further including delivering suspect bills to an output receptacle of the second set.

257. The method of claim 255 further including delivering suspect bills to an output receptacle of the first set.

258. The method of claim 214 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

259. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

- receiving a stack of bills in an input receptacle of the evaluation device;
- transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;
- counting and determining the denomination of the bills utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;
- flagging a bill when the denomination of the bills is not determined;
- wherein the flagging comprises halting the transporting when a bill is flagged; and
- delivering bills that have been denominated including bills of a plurality of denominations to a first set of one or more of the output receptacles.

260. The method of claim 259 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

261. The method of claim 259 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

262. The method of claim 259 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

263. The method of claim 259 wherein the halting occurs with the bill whose denomination has not been determined being the last bill transported to one of the output receptacles.

264. The method of claim 259 further including delivering bills that have not been denominated to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

265. The method of claim 264 further including re-stacking denominated bills in an output receptacle of the first set and re-stacking bills which have not been denominated in an output receptacle of the second set.

266. The method of claim 259 wherein the detector includes a stationary optical scanning head, and further including scanning at least a preselected segment of each bill transported between the input and output receptacles along the transport path by the stationary optical scanning head, producing an output signal from the stationary optical scanning head representing the scanned image, and wherein the determining of the denomination of each scanned bill utilizes the output signal.

267. The method of claim 259 wherein the transporting is performed at a rate of at least about 800 bills per minute.

268. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

- receiving a stack of bills in an input receptacle of the evaluation device;
- transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;
- counting and determining the denomination of the bills utilizing a detector positioned along a transport path between the input receptacle and the output receptacles; and
- determining whether the bills are suspect;



flagging a bill that has been determined to be suspect; and  
wherein the flagging comprises halting the transport mechanism when a bill is determined to be suspect.

269. The method of claim 268 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

270. The method of claim 268 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

271. The method of claim 268 wherein the halting occurs with the suspect bill being the last bill transported to one of the output receptacles.

272. The method of claim 268 wherein the detector includes a stationary optical scanning head and further including scanning at least a preselected segment of each bill transported between the input and output receptacles, producing an output signal representing the scanned image, and wherein the determining of the denomination of each scanned bill utilizes the output signal.

273. A method of evaluating a stack of currency bills using a high-speed United States currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the currency evaluation device;  
transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device at a rate of at least 800 bills per minute, at least one of the output receptacles being adapted to receive more than one denomination of bills;  
counting and determining the denomination of the bills including United States bills of a plurality of denominations at a rate of at least 800 bills per minute, utilizing a detector positioned along a transport path between the input receptacle and the output receptacles; and

flagging bills that meet or fail to meet any of certain non-piece count related criteria, a bill meeting or failing to meet any of the criteria being termed a flagged bill; and

wherein the flagging comprises halting the transporting with a flagged bill that meets or fails to meet at least a given set of the criteria positioned in one of the output receptacles.

274. The method of claim 273 wherein the halting occurs with a flagged bill being positioned as the last bill in one of the output receptacles.

275. The method of claim 273 wherein the halting occurs with a flagged bill being located at a predetermined position.

276. The method of claim 273 wherein the certain criteria include the denomination of a bill, a bill failing to meet a criterion of having its denomination determined being termed a no call bill.

277. The method of claim 276 further including determining whether a bill is a stranger bill and wherein the certain criteria include a bill being a stranger bill.

278. The method of claim 277 further including delivering no call bills to a first set of one or more of the output receptacles and delivering stranger bills to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

279. The method of claim 277 further including determining whether a bill is a suspect bill and wherein the certain criteria include a bill being a suspect bill.

280. The method of claim 279 wherein no calls bills are delivered to a first output receptacle, wherein stranger bills are delivered to a second output receptacle, and wherein the suspect bills are delivered to a third output receptacle.

281. The method of claim 279 wherein the output receptacles include a third output receptacle and further including directing no call bills and stranger bills to the third output receptacle and directing suspect bills to a second output receptacle.

282. The method of claim 281 wherein the halting occurs when a bill is directed to the third output receptacle.

283. The method of claim 281 wherein the halting does not occur when a bill is directed to the third output receptacle.

284. The method of claim 273 wherein the output receptacles include a third output receptacle and further including delivering flagged bills to the second output receptacle.

285. The method of claim 273 further including determining whether a bill is a stranger bill and wherein the certain criteria include a bill being a stranger bill.

286. The method of claim 273 further including determining whether a bill is a suspect bill and wherein the certain criteria include a bill being a suspect bill.

287. The method of claim 273 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

288. The method of claim 273 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

289. The method of claim 273 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality

of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

290. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

- receiving a stack of bills in an input receptacle of the evaluation device;
- transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device along a transport path;
- counting and determining the denomination of the bills, utilizing at least one detector positioned along a transport path between the input receptacle and the output receptacles;
- generating a characteristic information output signal in response to detected characteristic information via the detector;
- electronically coupling the characteristic information output signal;
- receiving the characteristic information output signal;
- generating a denomination signal in response to the information output signal;
- producing tracking signals in response to the physical movement of the bills;
- generating a no call signal when the denomination of a bill is not determined;
- generating a stopping signal in response to the no call signal;
- stopping a transport drive motor in response to the stopping signal; and
- directing the bills which have been denominated to a first set of one or more of the output receptacles.

291. The method of claim 290 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

292. The method of claim 290 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

293. The method of claim 290 wherein the stopping occurs with the bill whose denomination has not been determined being the last bill transported to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

294. The method of claim 290 further including directing bills which have not been denominated to a second set of one or more of the output receptacles, the output receptacles of the second set being different from the output receptacles of the first set.

295. The method of claim 294 further including re-stacking denominated bills in one of the first set of output receptacles and re-stacking bills which have not been denominated in one of the second set of the output receptacles.

296. The method of claim 290 further including generating a scanned pattern from each of the bills based on the characteristic information output signal, determining the denomination of a bill by comparing the scanned pattern generated from the bill with master patterns associated with different denominations of bills, and storing the master patterns.

297. The method of claim 296 wherein the detector comprises an optical scanhead and wherein the scanned and master patterns comprise optical patterns.

298. The method of claim 297 further including correlating the scanned pattern generated from the bill with master patterns associated with different denominations of bills and determining the denomination of the bill if the scanned pattern sufficiently correlates with one of the master patterns.

299. The method of claim 290 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

300. The method of claim 290 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

301. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

- receiving a stack of bills in an input receptacle of the evaluation device;
- transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;
- counting and determining the denomination of the bills utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;
- generating a characteristic information output signal in response to detected characteristic information via the detector;
- electronically coupling the characteristic information output signal;
- receiving the characteristic information output signal;
- generating a denomination signal in response to the information output signal;
- generating a suspect signal when a bill is determined to be suspect;
- producing tracking signals in response to the physical movement of the bills;
- generating a stopping signal in response to the suspect signal; and
- stopping a transport drive motor in response to the stopping signal.

302. The method of claim 301 wherein the counting and determining the denomination of the bills comprises counting and determining United States currency bills of a plurality of denominations.

303. The method of claim 301 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

304. The method of claim 301 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

305. The method of claim 301 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

306. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;

counting and determining the denomination of the bills utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

halting the transporting in a predetermined manner in response to a determination that a bill meets a stranger bill criterion and in response to a determination that a bill meets a no call bill criterion; and

wherein a bill which meets the stranger bill criterion is termed a stranger bill, and wherein a bill which meets the no call bill criterion is termed a no call bill.

307. The method of claim 306 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

308. The method of claim 306 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

309. The method of claim 306 wherein the transporting, counting and determining of the currency bills is performed at a rate in excess of 800 bills per minute.

310. The method of claim 306 further including permitting manual removal of a no call or a stranger bill after halting the transporting.

311. The method of claim 310 further comprising restarting the operation of the device via a key after halting the transporting.

312. The method of claim 306 wherein the halting occurs with the bill meeting the stranger bill or non call bill criterion being positioned in one of the output receptacles.

313. The method of claim 306 wherein the halting occurs with the bill meeting the stranger bill or no call bill criterion being positioned as the last bill in one of the output receptacles.

314. The method of claim 306 wherein the halting occurs with the bill meeting the stranger bill or no call bill criterion being located at a predetermined position.

315. The method of claim 306 further including directing denominated currency bills of more than one denomination to at least one of the output receptacles.



316. The method of claim 306 wherein the output receptacles include a second output receptacle, and further including delivering the bills meeting the stranger bill or no call bill criterion to the second output receptacle.

317. The method of claim 306 further including determining whether bills are suspect and wherein one of a criterion is a bill being a suspect bill.

318. The method of claim 317 wherein the output receptacles include second and third output receptacles, and further including delivering stranger and no call bills to the second output receptacle and wherein suspect bills are delivered to the third output receptacle.

319. The method of claim 318 wherein the halting occurs when a bill meeting the no call criterion or the stranger criterion is delivered to the second output receptacle.

320. The method of claim 306 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, bills of at least two of the denominations having the same dimensions.

321. The method of claim 306 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

322. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;

counting and determining the denomination of the bills including bills of a plurality of denominations utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

routing bills having a target denomination to one of the first output receptacles,

routing bills having any other of the plurality of denominations to a second one of the output receptacles; and

presenting no call bills in a third one of the output receptacles.

323. The method of claim 313 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

324. The method of claim 313 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

325. The method of claim 313 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

326. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device;

counting and determining the denomination of the bills including bills of a plurality of denominations utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

determining the face orientation of the bills;

routing bills having a target denomination and a target face orientation to one of the first output receptacles,

routing bills having the target denomination and a face orientation opposite the target face to a second one of the output receptacles; and

presenting bills not having the target denomination in a third one of the output receptacles.

327. The method of claim 326 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

328. The method of claim 326 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

329. The method of claim 326 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

[ 330. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device, the output receptacles include at least a first output receptacle and a second output receptacle;

counting and determining the denomination of the bills including bills of a plurality of denominations utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

monitoring whether any bills are present in the first and second output receptacles;

routing bills having a first target denomination to the first output receptacle;

routing bills having a second target denomination to the second output receptacle;

upon encountering a bill having neither the first target denomination nor the second target denomination; then

- a) stopping the operation of the device if both the first and the second output receptacles have one or more bills therein; or
- b) routing the bill having neither the first target denomination nor the second target denomination to an empty one of the first and second output receptacles if one of the output receptacles is empty and resetting the first target denomination to be the denomination of the bill if the bill is routed to the first output receptacle and resetting the second target denomination to be the denomination of the bill if the bill is routed to the second output receptacle.

331. The method of claim 330 wherein the counting and determining the denominations of the bills comprising counting and denominating United States currency bills of a plurality of denominations.

332. The method of claim 330 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

333. The method of claim 330 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

334. A method of evaluating a stack of currency bills using a currency evaluation device comprising:

receiving a stack of bills in an input receptacle of the evaluation device;

transporting the bills, one at a time, from the input receptacle to one of two or more output receptacles of the currency evaluation device, the two output receptacles having at least a first output receptacle and a second output receptacle;

counting and determining the denomination of the bills including bills of a plurality of denominations utilizing a detector positioned along a transport path between the input receptacle and the output receptacles;

monitoring whether any bills are present in the first and second output receptacles;

routing bills having a first target denomination to the first output receptacle;

generating a denomination change error upon first encountering a bill not having the first target denomination;

designating a second target denomination to be the denomination of the bill causing generating the first denomination change error upon the first occurrence of a denomination change error,

routing bills having a second target denomination to the second output receptacle;

upon encountering a bill having neither the first target denomination nor the second target denomination, then generating a denomination change error and

- a) stopping the operation of the device if both the first and the second output receptacles have one or more bills therein; or
- b) routing the bill having neither the first target denomination nor the second target denomination to an empty one of the first and second output receptacles if one of the output receptacles is empty and resetting the first target denomination to be the denomination of the bill if the bill is routed to the first output receptacle and resetting the second target denomination to be the denomination of the bill if the bill is routed to the second output receptacle.

335. The method of claim 334 wherein the counting and determining the denomination of the bills comprises counting and determining United States currency bills of a plurality of denominations.

336. The method of claim 334 wherein the counting and determining of the currency bills is performed independent of the size of the bills.

337. The method of claim 334 wherein the determining of the denomination of bills includes denominating currency bills of a plurality of denominations, genuine bills of the plurality of denominations having a plurality of images associated therewith, the plurality of images defining the plurality of denominations, and further including scanning the image associated with each of the bills and distinguishing among the plurality of denominations using the scanned image.

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